NASA RDAC Report to the GHRSST Science Team

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NASA RDACs

* Current components
  * **JPL** RDAC
    * MODIS Aqua and Terra L2P
    * VIIRS L2P
    * MUR L4
* **JPL_OUROCEAN** RDAC
    * G1SST L4

•VIIRS L2P v2016.1 – should be v2016.0, from Jan. 6th, 2012 to present.)

MODIS and VIIRS L2P

* Aqua and Terra L2P v2014.0
  * https://podaac.jpl.nasa.gov/dataset/MODIS_T-JPL-L2P-v2014.0
  * Used as input layer in SOTO visualization
* VIIRS L2P v2016.0
  * https://podaac.jpl.nasa.gov/dataset/VIIRS_NPP-JPL-L2P-v2016.0
  * 2012-2018 time series completed March 2018
* Operations nominal. Data within 3-4 hours of observation

G1SST

* G1SST status
  * G1SST to keep producing global maps on the daily basis
  * The G1SST 2DVAR blending algorithm has been revised for blending L2 VIIRS SSTs, with emphasis on keeping small-scale features resolved by VIIRS.

MUR L4

* MUR improvements
  * Experimental field "dt_1km_data" introduced to indicate temporal proximity to MODIS (and VIIRS) L2P samples at each grid
    * Enables MUR L4 to be use as a L3C
    * Included in MUR product since mid-2016
  * Smoothness optimization (given the L2P sampling patterns and timing) using simulated SST dynamics (from 2km global ECCO2 runs)
    * Any community interest in such a simulated SST data set?
  * 25-km grid MUR product
    * A by-product of the full MUR production line.
    * Part of COVERAGE project (see Vazquez posters).

COVERAGE

(CEOS Ocean Variables Enabling Research and Applications for GEO)

- Collaborative effort within CEOS and 3-year NASA project
  - Involves the 4 Ocean VCs (SST, OST, OCR, OSVW) and GEO projects (MBON, Blue Planet) to enable more widespread use of ocean satellite data in support of applications.
  - Initial Phase focused on creating common 25km global gridded products of 4 Ocean VCs.
  - Platform for improved, integrated ocean data access utilizing emerging data management and cloud capabilities
  - See poster by J. Vazquez et al.

NASA Physical Oceanography

* Recent SST initiatives and proposals
  * National Ocean Partnership Program (NOPP) MISST follow on. PI Chelle Gentemann
    * Artic SST emphasized
* ROSES Physical Oceanography 2017. Three awards.
  * Prabhat Koner (Univ. of Maryland)
    * Physical Deterministic SST from MODIS and VIIRS Radiances
  * Peter Minnett (Univ. of Miami)
    * Merging Optimal Estimation and Multi-Channel Atmospheric Corrections for Accurate SSTs from MODIS and VIIRS
  * Frank Wentz (Remote Sensing System)
    * Improved Air-SE Essential Climate Variables from Aqua AMSR-E and VIIRS